

by the mountain zebra. The difference in the general system of striping between "Matopo" and his offspring is well brought out in the figures here reproduced, by the courtesy of the publishers, from Prof. Ewart's work. A more special point, but one of great interest, is that exemplified in the accompanying figures of the brow-stripes in "Matopo," in "Romulus," and in a Somali zebra. The numerous rounded arches shown on the forehead of "Romulus" are very different from the four or five acutely pointed arches of "Matopo," and clearly bear a much greater resemblance to the corresponding pattern of the Somali zebra. It should, however, be mentioned that a system of brow-striping not unlike that of "Romulus" occurs in Crawshay's zebra, a member of the Burchell group.

On one point of special importance the experiments have so far given results that, however interesting

ments dealt with in the present volume, but enough has probably been said to show the importance of the problems which Prof. Ewart has set himself to solve, and the prospects of advance in knowledge which these researches hold out. It only remains to say a word in commendation of the general get-up of the book, and of the character and accuracy of the illustrations, which in many cases are reproduced from actual photographs. The absence of an index or detailed table of contents is a drawback, but this, like the frequent repetition of the same facts, is perhaps inseparable from the method of publication adopted. A tabular list of the hybrids, giving their parentage and the more important features of their aspect, might be a useful addition, as the reader finds it a little difficult at present to piece together the various details, scattered through many parts of the work, under their proper headings. But any small defects of this kind will, no doubt, be completely remedied in the connected and systematic account of the fruit of his researches which Prof. Ewart leads us to hope for at some future time. Meanwhile, the course of his experiments will be watched with keen interest by all those who realise the importance, both scientific and practical, of a right conception of the laws of heredity. F. A. D.

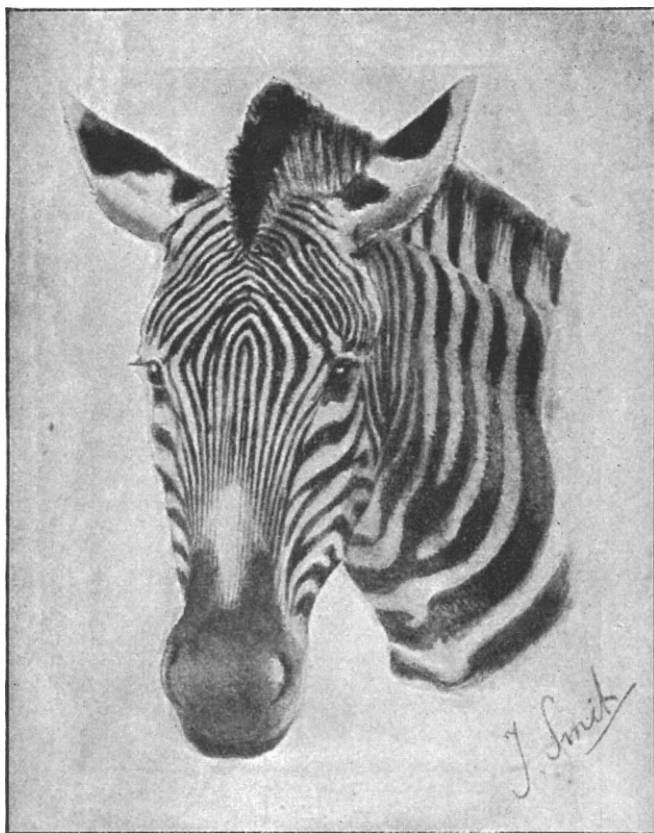


FIG. 5.—Somali Zebra.

scientifically, are from the practical side disappointing. Following a suggestion of Captain Lugard, that zebra mules might possibly turn out to be immune to the disease communicated by the tsetse fly, and might thus help in solving some of the difficulties of African transport, Prof. Ewart, with great liberality, inoculated three of his hybrids with some of the tsetse organism at that time under investigation by Messrs. Blandford and Durham. The result of this experiment is not given in the present volume, but in the recently published *Proceedings of the International Congress of Zoology at Cambridge* it is stated that the inoculated animals, though apparently somewhat more resistant than horses, all died in about eight weeks.

The above-mentioned are a few only of the points of interest brought out by the remarkable series of experi-

jections. Classical influences, with a certain sympathetic similarity, may have caused the dislike once so general among our own countrymen, which has only been changed during the last thirty or forty years. These have witnessed a revulsion of sentiment which, whatever be its cause, is certainly one of the remarkable features in the later part of the nineteenth century.

But to pass from a general question to more particular topics, we can incidentally gather from this volume no bad idea of how some parts of scientific knowledge have advanced during the last four centuries. Prior to this epoch men knew little of science, and less of the mountains; pioneers were few, and the history of climbing—except when there was no help for it—was almost

#### PIONEER CLIMBERS.<sup>1</sup>

NOTWITHSTANDING what has been done by Coolidge and Freshfield, by C. E. Mathews and F. Pollock, for the pioneers in mountain climbing, there is still room for a book so comprehensive as that before us. Mr. Gribble has collected a quantity of interesting information, and prints at the end of his work several rare and curious documents. It is, moreover, not wholly restricted to the Alps, for it touches on early ascents in the Pyrenees and the Apennines. These, however, are distinctly subordinate; the interest, as is only natural, centres on the mountain backbone of Europe. This is many-sided, but on the present occasion we must restrict ourselves to aspects more or less scientific. A wide question is suggested at the outset: What caused that horror of mountains which was evidently so genuine among the chief nations of Europe till a period comparatively late in history? It was not felt by the Hebrew, as Mr. Gribble shows, but the Greek seems to have cared little for them, and the Roman detested them. Perhaps the practical nature of this people viewed them as an impediment to "imperial expansion," a sentiment hinted at in Napoleon's question, "When will the Simplon be practicable for cannon?" Moreover, in Rome's more luxurious days the rough roads, hard fare, and bad lodging of a journey across the Alps would naturally be ob-

jectionable. Classical influences, with a certain sympathetic similarity, may have caused the dislike once so general among our own countrymen, which has only been changed during the last thirty or forty years. These have witnessed a revulsion of sentiment which, whatever be its cause, is certainly one of the remarkable features in the later part of the nineteenth century.

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<sup>1</sup> "The Early Mountaineers." By Francis Gribble. Illustrated. (London: T. Fisher Unwin, 1899.)

a blank. A monk of Canterbury, who crossed the Great St. Bernard late in the twelfth century, piously prayed that none of his brethren might come into that place of torment, and till long after that, though Leonardo da Vinci set a better example, and pilgrimages even began



FIG. 1.—John Tinner's Dragon.

to be made to the top of the Roche Melon, the Alps found few to praise them. Fancy invested them with superstitious terrors, of which the legend of Pilatus is an apt example, but here and there we come on the track of a sceptical traveller. In the first rank of these forerunners of the modern man of science is Conrad Gesner, who laughed at those stories, and was a true lover of the mountains. His successor, Josias Simler, even describes, about the year 1574, the precautions to be taken in crossing snowfields and glaciers, but the seventeenth century had begun before any careful note was taken of the latter. Then the fact of their motion was observed, and was communicated some years later, in 1669, to our own Royal Society; but the first speculations as to its cause appear to have been published by J. J. Scheuchzer, a professor, like the two first-named, at Zürich. Though evidently ill-adapted for mountain walking, he stuck bravely to it for some years at the beginning of the eighteenth century, and at last published two bulky volumes with numerous illustrations. These, in many respects, are interesting as a picture of Switzerland long before the coming of the tourist. But his book testifies to other changes, for it is full of dragon stories, and gives us portraits (such as that now printed) of many a loathly worm which now finds no representative on land, whatever it may do in the sea. Scheuchzer, in fact, though a good mathematician and a keen observer of minerals, plants, and even glaciers, had no critical faculty. He represents a type of student not yet extinct—the man whose first care is for “the literature of the subject,” and who attaches an equal value to

everything which appears in print. But before long in De Luc and Bourrit, and lastly in the really great De Saussure, scientific mountain travel begins, and the new era may be said to dawn. Now science finds in the Alps a workshop as well as a playground, and special memoirs such as that on Mont Blanc, noticed in these columns on June 15 (p. 152), are becoming common. Yet it is only just over a century since the last volume of “*Voyages dans les Alpes*” appeared.

Many curious illustrations, as we have intimated, are reproduced by Mr. Gribble, some indicating the strides which have been made in the representation of scenery, especially Alpine, during the last two centuries. The one given below was published about the year 1760, yet it bears little resemblance to nature, while some earlier than it are still more completely conventional. Incidentally the quotations in this volume throw light on the fauna of the Alps, showing, for instance, that bouquetin were common in districts from which they have long vanished. Indeed, odds and ends of curious lore abound in these pages; so that we have to thank Mr. Gribble, not only for an amusing book, but also for a valuable addition to Alpine literature.

T. G. BONNEY.

#### BOWER-BIRDS.

SINCE the year 1840, when Gould communicated to the Zoological Society an account of their extraordinary “runs,” as they are locally called, the Bower-Birds of Australia and Papua have always attracted a large share of interest on the part not only of ornithologists but of students of the habits of animals. For in the construction of the “bowers” or “runs,” from which they take their name, these birds stand absolutely alone, although the “playgrounds” of the Argus pheasant are comparable to the smooth patches cleared in the jungle by one species of Bower-Bird. On such an interesting subject it is of the utmost importance to have as much definite information as possible at first hand, and we are therefore glad to welcome the paper on the Australian representatives of the group, from the pen of an original



FIG. 2.—Grüner's view of the Lower Grindelwald Glacier.

observer—Mr. A. J. Campbell, of Melbourne—which appears in the last issue of the *Proceedings* of the Royal Physical Society of Edinburgh, special value attaching to this communication from the excellent photographs of “runs” and nests with which it is illustrated.